5 REGULATORY REQUIREMENTS AND MINIMUM DESIGN CRITERIA

Establishing realistic design criteria is required to satisfy Washington State Department of Health (DOH) planning requirements, to evaluate the existing water system's adequacy, and to plan for future water system improvements. The minimum design criteria for the City of Kent (City) water system are in accordance with the standards and requirements set forth by the U.S. Environmental Protection Agency (EPA), DOH, and the Washington State Department of Ecology (Ecology), and for the water service area outside the City limits (in unincorporated King County) in accordance with the land use and planning guidelines of King County.

These standards are consistent with the DOH Group A Public Water Systems Waterworks Standards, the South King County Coordinated Water Supply Plan (SKC CWSP) Design and Construction Standards, and King County's Rules and Regulations relating to Fire Hydrants and Water Mains as authorized under King County Ordinance 5828. In some instances, the City Standards may be more stringent and/or restrictive than the requirements of other agencies, in which case the City Standards shall apply.

Water system facilities constructed within the water service area must also be designed and constructed according to City Standards. The minimum criteria put forth herein do not replace or supersede the City's Construction Standards, Developer Extension requirements or other codes and requirements associated with development proposals and permits. The City's most current Construction Standards are contained in **Appendix G** and have been utilized in this summary of design criteria. The Construction Standards can also be found on the City's website.

The City's standards and minimum design criteria accommodate anticipated maximum daily demands (MDD), as well as the demands on the system for peak hour, fire flow and other emergency situations. Minimum design criteria are established for water supply, storage volume, distribution and transmission main capacity and water quality standards. The criteria are used to determine existing deficiencies in the water system and projected water system requirements for the planning area described previously in this document. **Chapter 7** summarizes the analyses performed on the system and identified deficiencies in meeting the needs of the current and projected customers of the system.

This Chapter also discusses the City's project review procedures for both public works and developer extension projects and describes policies and requirements for outside parties. A discussion of the City's construction standards, construction certification, and construction follow-up procedure is also provided.

REGULATORY REQUIREMENTS

FEDERAL REQUIREMENTS

Public Law 93-523, the Safe Drinking Water Act (SDWA), directs the U.S. Environmental Protection Agency (EPA) to establish minimum national drinking water standards limiting the amount of potentially harmful substances which may be present in drinking water sources. These limits are regulated by the State of Washington Department of Health and adhered to by the City of

Kent. Complete details of current regulations are contained in **Chapter 6** and the City's water quality monitoring program is provided in **Appendix I**.

Because of the listing of the Puget Sound Chinook Salmon and Bull Trout as a "threatened species," rules and regulations under the authority of the Endangered Species Act (ESA) can affect water system operations. As part of its ESA compliance program, the City operates consistent with best management practices as appropriate to protect endangered species.

STATE OF WASHINGTON REQUIREMENTS

The rules and regulations regarding public water supplies are a part of the Washington Administrative Code (WAC) and are adopted pursuant to the provisions in the Revised Code of Washington (RCW) 43.20.050 for the protection of public health. The rules and regulations provide the minimum standards for design, construction, operations and maintenance of public water systems and conform with the Safe Drinking Water Act of 1974 and all subsequent amendments thereto.

The Growth Management Act (GMA) of 1990 (RCW 36.70A) has a direct impact on utility system planning by requiring a complete inventory of existing system facilities and a comprehensive effort toward determining the capability of utility systems to support anticipated growth and a plan to finance capital facilities. The GMA requires cities and counties to discuss and plan for seven key elements in their comprehensive plans: (1) Land Use, (2) Housing, (3) Capital Facilities, (4) Utilities, (5) Transportation, (6) Economic Development, and (7) Parks and Recreation. A primary outcome of the growth management planning in King County is the delineation of an Urban Growth Area (UGA) boundary within which an urban level of service is required. GMA rules and regulations will be crucial to projecting future water demands. Because much of the Retail Water Service Area for the City of Kent is within the UGA, as discussed in **Chapter 3,** the pressure for growth will remain substantial. In addition, the City is required to plan for the provisions of an "urban level of service" because it serves within the UGA.

Regulations related to accounting practices for municipalities such as the City of Kent are implemented and monitored by the State of Washington Auditor. Kent maintains a long-term system inventory program utilizing computerized mapping, equipment inventory and a Geographical Information System (GIS). These programs have assisted in compliance with Government Accounting Standards Bureau statement 34 requirements and have been a key element in development of this WSP.

DOH's "Water System Design Manual" is the primary document governing the sizing and design of public water systems in the State of Washington. This publication sets forth the minimum system plan and reliability considerations. Criteria for distribution system design, water storage and daily supply requirements are summarized in this Chapter.

KING COUNTY REQUIREMENTS

Because a portion of the Retail Water Service Area is within unincorporated King County, the City must operate within the rules and regulations established by King County for these areas and utilize County planning data in developing growth projections for areas outside the City limits. Specifically, the King County Comprehensive Plan has a direct impact on the planning effort. King County Code Titles 13.24 (Sewer and Water Comprehensive Plans), 14, 21A, and 17.08, as well as Countywide Planning Policies and King County Comprehensive Plan Policies related to water utilities, have been utilized in the development of this document to ensure that water system operations and construction

standards are in conformance with King County requirements. The City must also operate within the terms of its current right-of-way franchise with King County.

CONDITIONS OF WATER SERVICE

The City of Kent currently provides water service to customers within its established service area boundary. Additionally, the City maintains metered interties with the City of Renton, the City of Tukwila, Highline Water District, the City of Auburn, Lake Meridian Water District, and Soos Creek Water and Sewer District.

Service area policies such as developer extension requirements, fee payment responsibilities, design standards and related issues are governed by the Kent City Code and the City of Kent Construction Standards.

FIRE FLOW REQUIREMENTS

The Washington Administrative Code (WAC) 246-290-230(6) states the following requirement for public water distribution systems:

> "If fire flow is to be provided, the distribution system shall also provide maximum day demand (MDD) plus the required fire flow at a pressure of at least 20 psi (140 kPa) at all points throughout the distribution system, and under the condition where the designated volume of fire suppression and equalizing storage has been depleted."

In accordance with DOH requirements, the Kent City Code defines "Fire Flow" as the measure of the sustained flow of available water for fighting fire at a specific building or within a specific area at 20 psi residual pressure. The City's fire flow requirements are shown in **Table 4-11**.

SOURCE REQUIREMENTS

SOURCE QUANTITY

The City will plan for at least 20 years into the future so that future water resource limitations can be handled effectively.

The City will ensure that the capacity of the system, including wells, pump stations, storage, and transmission mains, is sufficient to meet the maximum day demands of the system.

The City will participate in regional supply management and planning activities as staff resources allow.

WATER QUALITY STANDARDS

The City will pursue steps to meet or exceed all water quality regulations and standards.

Security of the water supply is of primary importance. The City will take all reasonable measures to protect its system and customers. Security improvements identified in vulnerability assessment reviews shall be given the highest priority.

Chapter 6 identifies the existing water quality standards that the city's water system must comply with.

PERMIT EXEMPT WELLS

Those applicants within Water Resource Inventory Areas (WRIAs) 8 and 9 without constructed wells, and submitting building permits reliant on use of a permit-exempt well (RCW 90.44.050) after January 19, 2018, are subject to its terms and limitations. Such applicants shall be limited to a maximum annual average withdrawal of 950 gallons per day (gpd) per connection. This amount may be reduced to 350 gpd for indoor use only during drought conditions. The quantitative and other limitations associated with Engrossed Substitute Senate Bill 6091 shall remain in effect until a watershed restoration and enhancement plan is approved by Ecology and implementing rules are adopted.

In order to secure building permits, applicants located within the City's corporate boundaries shall be required to pay the City a fee of $500, $350 of which is to be transmitted to Ecology. The City is required to record relevant water use restrictions with the property title.

Ecology is recommending that local jurisdictions located within Hirst-affected basins adopt the following recording language: "Domestic water use at this property is subject to a water use limitation of a maximum annual average withdrawal of 950 gallons per day, per connection, subject to the 5,000 gallon per day limit provided in RCW 90.44.050."

GENERAL WATER MAIN REQUIREMENTS

PIPELINE VELOCITIES

During normal demand conditions, the velocity of water in a water main should be less than 5 feet per second (fps).

During emergency conditions, such as a fire, and for design purposes, the velocity of water in a water main may exceed 5 fps, but may not exceed 8 fps except in existing 6- or 8-inch dead-end water main serving residential areas. New dead-end water main installed within residential areas may be approved for a maximum velocity of 10 fps on a case-by-case basis by the City.

WATER MAIN EXTENSIONS

- All water main extensions shall conform to the design requirements of the City and DOH.
- This WSP indicates the location and configuration of the major elements of the existing and proposed City supply mains, distribution system, interties and loops. The exact location or configuration of this system may be modified, provided the proposed system remains consistent with the overall intent of the WSP.
- Mainline extensions will be required when properties do not front on a water main or when the existing main is deemed inadequate for the proposed use. It is a City policy that the water main is extended to the far edge of the property to be serviced, regardless of where the service connection is to be made.

WATER SYSTEM DESIGN PARAMETERS

- Desirable system working pressure shall be approximately 60 to 70 psi, but not less than 35 psi under Peak Hourly Demand (PHD). The minimum pressure in the water system under fire flow conditions shall be 20 psi.
- Individual service Pressure Reducing Valves (PRVs) shall be installed and maintained on water service lines, by the property owner, when system pressures are in excess of 80 psi.

- All new mains providing fire flow will be sized to provide the required fire flow at a minimum residual pressure of 20 psi and maximum pipeline velocity of 8 fps during maximum day demand conditions. In general, new water mains that will carry fire flow in residential areas shall be a minimum of 8 inches in diameter and looped for multi-family residential developments. Exceptions in residential areas may be considered as discussed in the **Velocity** section of this chapter. New water mains in commercial, business park, industrial, and school areas shall be a minimum of 12 inches in diameter and looped.
- Connections to existing water mains shall be accomplished by "Extension," "Wet Tap" or "Cut In" when mainline valves are required on the existing main. Connection to the existing main shall be per City Standard. No direct connection to the City's existing water system will be allowed until purity and leakage tests of the new system have been performed and passed.
- Two cubes for "Pigging" shall be installed in the new water main at the initial connection and at each lateral from the new water main. The Water Division will provide the cubes, they must be picked up by the contractor at the Water Division Shop.
- Dead end mains shall be avoided whenever possible. Where dead end mains are unavoidable, a minimum two (2) inch blowoff assembly is required. Blowoff sizes for various pipe diameters are listed in the City of Kent Construction Standards.

WATER MAIN LOCATION

- Water mains shall be laid at least ten (10) feet horizontally from any existing or proposed sanitary sewer. The distance shall be measured edge-to-edge. Any deviation from this requirement shall meet Ecology and DOH requirements and be allowed only upon approval of the Director.
- Perpendicular water main crossings of sanitary sewers shall be laid to provide a minimum vertical distance of eighteen (18) inches above the sewer line, measured from the bottom of the water line to the top of the sewer line. Where separation between the water line and sewer line is less than eighteen (18) inches, the sewer line shall be ductile iron. All sanitary sewer lines which cross above a water main, regardless of the separation, shall be ductile iron as well, with no joints within a nominal ten (10) feet of the water main.
- Installation of water mains near other potential sources of contamination will require written approval by the Director on a case by case basis. They would include but not be limited to; storage ponds, land disposal sites for wastewater or industrial process water containing toxic materials or pathogenic organisms, solid waste disposal sites, or any other facility where failure of the facility would subject the water in the main to toxic chemical or pathogenic contamination.
- Water mains shall be located at least five (5) feet away from any other utility, including but not limited to storm drains, power, natural gas, CATV, private fire lines, etc.

VALVES

Water valves are required at the following locations:

- Four hundred (400) foot maximum intervals in commercial/industrial and multi-family residential areas. Locations involving hospitals, medical clinics, and other uses determined by the City of Kent to be critical applications may be required to have intervals reduced.
- Eight hundred (800) foot maximum intervals in residential areas.

- All sides of mainline tees and crosses.
- At all water service, fire line, and hydrant connections to the City main.
- At both sides of all bridge crossings, railroad crossings and casing/bores.

Existing gate valves may be subject to replacement with a new resilient wedge gate valve or a new resilient wedge gate valve installed at the property line per City of Kent Construction Standards at the discretion of the Director.

COMBINATION AIR/VACUUM RELEASE VALVES

Combination air/vacuum release valves shall be located at high points along the main. As a guide, valves are necessary where the difference between high and low points is two (2) feet on a gradual rise, or any abrupt rise. Actual locations should be in accordance with good engineering judgement and approved by the Director. The air inlet/discharge opening shall be thirty six (36) inches above finished grade and provided with a screened downward facing vent opening. It shall be located outside of traffic areas and installed to prevent damage to landscaping and pedestrians.

BLOWOFFS

Blowoffs shall be located at the dead end of all mains for flushing and "pigging" purposes. Blowoff assemblies must be sized and designed to achieve a minimum velocity of 2.5 fps in the water main. These velocities are to be used as a guideline and do not relieve the Contractor from assuring a clean line. Two (2) inch is the minimum blowoff size.

Where cubes for "pigging" are required in the main line installation, the blowoff size shall be four (4) inch for six (6) through eight (8) inch water mains and six (6) inch for ten (10) through twelve (12) inch water mains. Fire hydrants are preferred in lieu of blowoff devices where flows and pressures warrant a hydrant.

Using water from blowoffs requires a use permit, meter and check valve assembly issued by the Water Division. Persons using water illegally will be prosecuted.

FIRE HYDRANTS

HYDRANT LOCATION

Fire hydrant locations shall be reviewed and approved by the Fire Marshal prior to plan approval. In general, fire hydrants shall be installed at the following locations:

- Will generally be located at street intersections.
- Six hundred (600) foot maximum intervals in single family residential area.
- Three hundred (300) foot intervals in multi-family and commercial areas.
- Upstream of a fire line vault, if an existing public hydrant is not available at a location approved by the Fire Marshal.
- At other locations as directed by the Fire Marshal.

HYDRANT CONNECTIONS

Connections to the existing main shall be as follows:

- Hydrant leads shall be Class 52 ductile iron.

- Hydrant leads shall not exceed fifty (50) feet in length.
- Wet tap connection with heavy-duty tapping sleeve and resilient wedge tapping valve is required.
- No service connections are allowed to hydrant leads.
- Using water from hydrants requires a use permit, meter and check valve assembly issued by the Water Division. Persons using water illegally will be prosecuted.

HYDRANT ASSEMBLIES

Fire hydrant assemblies shall be as follows per City Standard:

- Assemblies shall be shackled on runs eighteen (18) feet or less, or restrained with an approved type of mechanical restrained joint on runs longer than eighteen (18) feet, to the mainline.
- Public fire hydrants shall be painted white.
- Private fire lines require an approved backflow protection assembly to be installed and to be located on private property.
- Private fire hydrants shall be painted yellow.

CROSS-CONNECTION CONTROL

There shall be no cross connection whatsoever between the City water distribution system and any unapproved pipes, wells, pumps, private hydrants, tanks, non-potable fluid or any other contaminating materials that may backflow into the water system. The City's Cross-Connection Control Program is contained in **Appendix F**.

BACKFLOW PREVENTION

The degree of public health protection required must be commensurate with the degree of hazard presented. In situations of known or potential physical or toxic health hazards, air gap separation and/or reduced pressure backflow assemblies shall be required. Double check valve assemblies are generally utilized where aesthetic or detrimental effects on water quality may occur. Each water system connection has unique problems arising from location, climatic conditions, service demands, and other factors. Consequently, each cross-connection shall be examined on an individual basis and the City shall make the final determination as to the degree of backflow protection required.

Backflow protection assemblies proposed for use can be found on the current list of approved assemblies by the Washington State Department of Health. All backflow assemblies are required to be tested annually by a Washington State certified backflow assembly tester. Copies of inspection reports shall be provided to the City.

The City of Kent has codified its cross connection control program requirements, which can be found in Kent City Code chapter 7.02.050 – 7.02.105. These requirements are further detailed in the City's cross connection control program.

PREMISE ISOLATION

Where the City determines protection of the public water distribution system is necessary, a Backflow Preventer shall be installed at the property line commensurate with the degree of hazard as defined in WAC 246-290-010. Installation of Air Gaps shall be approved by submitted drawings in

accordance with the latest edition of the Cross Connection Control Manual, Pacific Northwest Section AWWA and the latest edition of the Uniform Plumbing Code. Double Check Valve Assembly and Reduced Pressure Backflow Assembly installations shall be in accordance with Standard Details 3-14 through 3-18 in the City's Construction Standards.

IRRIGATION SYSTEM

Cross-connection protection is required for all irrigation systems. In general, the City requires Double Check Valve Assemblies to be used. If a chemical injection irrigation system were to be installed, a Reduced Pressure Backflow Assembly would be required. Both types of installations require freeze protection.

DEDICATED FIRE LINES

Cross-connection protection is required for all Dedicated Fire Lines. In general, the City requires Double Check Detector Assemblies be used. If chemical additive is used or there is an auxiliary water supply available to the system, a Reduced Pressure Detector Assembly is required.

STORAGE REQUIREMENTS

Storage requirements are based on four components: Operational Storage, required to maintain sufficient storage for pump operation; Equalizing Storage, required to supplement production from water sources during periods of high demand; Standby Storage, required as a backup supply in case the largest source is out of service; and, Fire Storage, required in order to deliver fire flow for the required duration.

The minimum amount of storage required shall be the total combined amount of the operational, equalizing, standby, and fire storage. **Chapter 7** provides a complete analysis of the City's water storage requirements and capacities.

OPERATIONAL STORAGE

Operational storage is the volume of water available to supply the system under normal operating conditions while the source is considered "off". This volume varies according to the sensitivity of the water level sensors controlling the pumps or other supply source and the configuration of the tanks designed to provide the required volume while preventing excessive cycling of the pump motor(s).

EQUALIZING STORAGE

The volume of equalizing storage must be sufficient to meet hourly water system demands in excess of the rate of supply and must be at an elevation sufficient to meet these demands at a minimum delivery pressure of 30 psi.

STANDBY STORAGE

Standby storage is required in order to augment the available supply of water during a period of restricted flow from the supply source. Restriction of flow may be caused by a pumping equipment failure, supply line failure, maintenance or repair, or other condition which causes interruption in the supply.

FIRE FLOW STORAGE

Fire flow storage must be equal to the amount of water required to accommodate the maximum fire demand under a specified duration of time. Fire flow requirements are determined by the City Fire Marshal and **Table 4-11** puts forth the minimum fire flow requirements used for analysis purposes in this water system planning effort. Fire flow storage must be located above an elevation that yields a 20 psi service pressure to all services in the zone under maximum day demand conditions.

DEAD STORAGE

Dead storage is the amount of water not available at the minimum design pressure to the highest elevation served by the storage facility.

TELEMETRY SYSTEMS

Telemetry systems must be compatible with the City's existing SCADA system. The system must provide discrete status, continuous analog reporting, and control capability which is both sending and receiving. It must also have an integral backup power supply able to sustain communication for a 24-hour period.

BACKUP POWER REQUIREMENTS

Backup power shall be provided at all sources or pumping stations which are required to be operational during power failures in order to meet system reliability requirements, or to continuously maintain a positive distribution system pressure.

PROJECT REVIEW PROCEDURES

Depending on the project type, the City employs two different procedures to review proposed improvement projects. Project types include public works projects and developer extension projects. The review procedure for each project type is discussed in the following sections.

PUBLIC WORKS PROJECTS

Projects that require public works contracts must be developed and reviewed as part of a water system planning effort. Public works projects must be identified based on either a water system or water quality analysis. For this planning effort, the water system analysis is described in **Chapter 7**, and the water quality requirements are discussed in **Chapter 6**. Projects that are identified based on these analyses have subsequently be assessed and prioritized relative to each as described in **Chapter 9**.

Several considerations are given to assess proposed public works projects. The following considerations are those recommended by DOH.

- Health Standards. The project must conform with and support all applicable regulations and standards.
- Land Use. The project must conform with and support applicable plans and policies.
- Quantity. The adequacy of a future water source resulting from the improvement project must be evaluated.

- Reliability. The amount of increase to system reliability based on the improvement project should be evaluated with respect to the system's desired level of reliability.
- Costs. The project's capital costs should be evaluated along with annual operation and maintenance costs.
- Regional Benefit. The project's ability to help meet regional goals (e.g., multi-purpose benefits such as flood control and recreation), in addition to meeting local water system needs, should be reviewed.
- Environmental Effects. If the project could create detrimental environmental impacts, these impacts need to be defined. In addition, an assessment should be made to determine whether the negative impacts can be mitigated.
- Flexibility. The project's responsiveness to changed land use, water demand, and other resource management decisions should be evaluated. The potential for phased implementation should also be considered.
- Implementation. The project's potential to be publicly accepted, easily designed, constructed, and financed should be reviewed.
- Life Expectancy. The project's expected duration of operation should be estimated.
- Risk. The risks of selecting and not selecting the project for implementation should be assessed, considering health risks, economic risks, and reliability of service.
- Operation and Maintenance. The ability to operate, maintain and make connections and repairs to the facility in a cost-effective manner.

DEVELOPER EXTENSION PROJECTS

Developer extension water projects are primarily limited to distribution main improvements. These developer-funded projects do not have to be explicitly reviewed by DOH and discussed within the context of a water system plan. They only have to be implicitly included in the water system plan by including the City design and construction standards required for these projects. These standards in included in **Appendix G**.

Any extension, addition or modification of the City water system are permitted via a Civil Construction Permit with the City. Civil Construction Permits are also required for the construction of plat improvements required by the subdivision code, construction of new streets or (excluding private service connections) within public rights-of-way or easements, or any utility installation that the City has determined must be owned and operated by the City.

Upon review of the proposed development, the Director of Public Works shall make the determination of when a mainline extension is required and the extent of improvements necessary.

The procedure to receive Development Extension Approval is as follows:

- The developer or his agent shall meet the Director of Public Works or his designated representative to verify the extent of improvements required. Compliance with the appropriate Comprehensive Plans and the procedure to complete a developer extension agreement with the City will be discussed at the meeting. Water or sewer extensions outside the City Limits, but within the City's franchise area, may require approval of the King County Boundary Review Board prior to extension. If Boundary Review Board approval is required, a meeting with the City of Kent Property Manager is necessary to discuss the procedures.

- The developer shall retain a civil engineer registered in the State of Washington to prepare the engineering plans, specifications and cost estimates for the mainline utility and/or street improvements. The engineering plans shall conform to the general criteria and standards as outlined in the Design and Construction Standards.
- Design plans are submitted to the Permit Center for review with a Civil Construction Permit Application and the appropriate review fees.
- Following review and approval of the design plans by the Director of Public Works, the developer shall secure all necessary outside agency approvals.

After all necessary permits and approvals have been secured and verified, and all documents (i.e. warranty, bonds, easements, insurance…) and fees as required by the City have been submitted, a preconstruction meeting with the appropriate Public Works staff is scheduled. Following construction completion, the following must be submitted:

- As built plans prepared by a Professional Land Surveyor registered in the State of Washington must be submitted.
- Bill of Sale.
- Addendums to the Bill of Sale.
- City Inspector's Preliminary Project Approval.
- Final walk-thru field inspection of the completed public improvements is scheduled with the City's Project Engineer, contractor, inspector and the Operations Division. A punch list is prepared and upon completion of this punch list, the contractor must notify the inspector for final acceptance of the constructed improvements.
- The Public Works Department will then schedule the project on the Council agenda for official City and Council acceptance of the public improvements. Upon acceptance by the City Council, performance bonds and other cash bonds are then released upon submittal of the required maintenance bonds as outlined in the Developer's Extension Packet.

LATECOMERS AGREEMENTS

Any person who constructs a water, sewer, storm drainage or street extension at the direction of the City, in excess of that which is required to meet minimum standards or which meets minimum standards and will benefit properties abutting the new improvements may, with the approval of the Director of Public Works, enter into a contract with the City which will allow the Developer to be reimbursed for that portion of the construction cost that benefits the adjoining properties and/or is in excess of the minimum standard. The format for a Latecomers Agreement must be submitted for review and approval by the City prior to plan approval to be considered. The City shall be reimbursed for all costs associated with the review and approval of the Latecomers Agreements.

The developer is responsible for preparing the Latecomers Agreement for City review and approval. The City will be responsible for recording the Latecomers Agreement. The Agreement shall include a list of those properties which will benefit from the improvements, a map outlining and designating these properties, legal descriptions as required by the City, and backup data supporting the costs submitted. The City will collect the Latecomers Fee from persons wanting to connect or use said public improvements and subsequently sees that the developer receives the payment.

UTILITY CONNECTION PERMITS

DUTY TO SERVE

The City has a duty to provide service to all new connections within the retail service area when the circumstances meet the following four threshold factors:

- The City has sufficient capacity to serve water in a safe and reliable manner.
- The service request is consistent with local plans and development regulations.
- The City has sufficient water rights to provide service.
- The City can provide service in a timely and reasonable manner.

The time-period starts for measuring timely and reasonable service when the water service application is first submitted to the City. The following section provides additional details regarding the City's duty to serve policies. A reasonable water service request meets the Duty to Serve requirements, is consistent with City Code Section 7, and meets the Permit Requirements outlined in the following section.

PERMIT REQUIREMENTS

The connection of private services to the City of Kent Utility System requires the issuance of the following permits:

- Water Meter Permits - Prior to the construction of a domestic water service, the owner or authorized agent, shall obtain a Water Meter Permit from the City. Permits will not be issued for connection to a new main until the system is ready for Council acceptance (except for projects where multiple buildings are approved for phased occupancy). For large, new developments, no permits will be issued until As-builts are in, walk-thru inspections are completed and the Bill of Sale is Council ready.
- Fire Hydrant Permit - Prior to the installation of a public fire hydrant, the owner/agent shall obtain a Fire Hydrant Permit from the City and approval of the location from the City Fire Marshal.
- Fire Line Connection Permit – Prior to the connection of a Fire line to the City water main, the owner/agent shall obtain a Fire Line Connection Permit from the City.
- Private Fire Line Permit – Prior to the installation of a private sprinkler system, private fire line and/or private fire hydrant(s), the owner/agent shall obtain a Private Fire Line Permit from the City Fire Marshal. In addition, a Backflow Assembly Permit shall be obtained if approved backflow prevention is not provided on the private fire line. Additional licenses are required by the Washington State Fire Marshal's Office for these installations.
- Outside Agency Permits - In addition to the permits listed above, the developer is responsible for securing and abiding by the conditions imposed by permits required by outside agencies. These permits include County and State DOT right-of-way permits, Hydraulic Permits, Shoreline Permits, Corps of Engineers, Department of Fisheries Permits, etc.
- King County right-of-way permit - For water extensions in King County right-of-way, the Owner shall obtain a King County right-of-way permit prior to the preconstruction meeting. Conditions and requirements set forth by the County shall comply with King County Road Standards. The City and the Contractor must schedule and attend a preconstruction meeting with King County right-of-way inspection staff prior to starting any work. Permit and

Inspection Fees charged to the City by the County will be billed to the Contractor or owner in full. All construction and restoration must be completed to the satisfaction of the County and City.

- Deduct, Water Use Only, and Backflow Assembly Permits - Prior to the installation of a water use only, deduct meter and Backflow assembly the owner/agent shall obtain a Water Service Permit from the City.
- Water system capacity will be evaluated at the time of water service application. The City will use the capacity analysis contained in **Chapter 7** of this WSP to evaluate source of supply, storage, and water rights capacity available to the applicant.
- Water system capacity, pressure, and fire flow will be considered when providing water availability to applicants.
- Water availability shall expire at the time that the associated permit expires (i.e., land use, site civil, or building permit).
- Time extensions in regard to water availability shall be granted in accordance with the associated permit requirements. When extensions are denied, the disputes are handled through the rules guiding the associated permit process. Disputes can be brought to the City Council for discussion.

TEMPORARY WATER SERVICE

In accordance to City Code Section 7.02.180, when water service is required for a specific short-term duration, upon approval by the director of public works, a temporary water meter may be obtained from the water utility.

Such meters shall only be used for a designated project and shall be promptly returned to the water utility upon completion of the project or at the end of sixty (60) days, whichever comes first. The meters are to be returned in the same condition as when rented, and the user shall be held responsible for any damage thereto including paying all repair or replacement costs. While in the user's possession, the user shall be solely responsible for the meter and as such, should it be lost or stolen, the user shall pay the water utility the cost of its replacement.

The Director of Public Works shall require that a cash bond be deposited with the City prior to receipt of a temporary meter. The amount of the bond shall equal the replacement cost of the respective meter. Upon return of the meter, and following the payment of all outstanding charges including any meter repair or replacement costs, the cash bond shall be released back to the user.

Temporary meters may be moved from one hydrant to another within the same project; provided, the water utility is notified in advance of the proposed relocation and that hydrant wrenches are used to make all connections and disconnections.